

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF: :
HIDEAKI YOSHIDA ET AL. : NEW APPLICATION DIVISION
SERIAL NO: NEW APPLICATION :
FILED: HEREWITH :
FOR: CONTACT PROBE AND PROBE
DEVICE

PRELIMINARY AMENDMENT

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

SIR:

Prior to a further examination on the merits, please amend the above-identified application as follows:

IN THE CLAIMS

Please cancel Claims 2-11 and 14-20 without prejudice:

Please amend Claims 1 and 12 as follows:

1. (Amended) In a probe device, an improved contact probe comprising:

a film;

a plurality of wiring patterns formed on a first surface of the film, each wiring pattern having a front end portion projecting out from the first surface of the film in a direction parallel to the first surface of the film so as to form contact pins; and

a metal layer provided on a second surface of the film,

wherein the plurality of contact pins include a fabricated bending point at a middle portion in an axial line direction with a Ni plating treatment.

12. (Amended) In a probe device, an improved contact probe device including a plurality of contact probes, each contact probe comprising:

a film;

a plurality of wiring patterns formed on a first surface of the film, each wiring pattern having a front end portion projecting out from the first surface of the film in a direction parallel to the first surface of the film so as to form contact pins; and

a metal layer provided on a second surface of the film;

wherein the plurality of contact probes are arranged such that the axial lines of the contact pins are substantially vertical to a contact face of an object of measurement, and the plurality of contact probes are disposed in parallel so as to provide spaces between respective faces of the films of the plurality of contact probes, and

wherein the plurality of contact pins include a fabricated bending point at a middle portion in an axial line direction with a Ni plating treatment.

REMARKS

Favorable consideration of this application, in view of the following comments and as presently amended, is respectfully requested.

The present application is a Divisional of copending parent U.S. Application Serial No. 08/862,414.

In that parent application Claims 1, 12, and 13 were directed to the embodiment of Figure 109 of the present specification. The prosecution in that parent application indicated that those claims directed to that Figure 109 differed from the elected species of Figure 107.

To now ensure proper consideration of those amended claims presented in the parent of the present application, the present Divisional application is submitted to present those claims directed to the embodiment of Figure 109. Thus, by the present Preliminary Amendment Claims 1, 12, and 13 as from the parent of the present new Divisional

Application are submitted, although with some minor modifications to address the rejections in the parent of the present new Divisional Application.

In the parent of the present application the claims directed to the embodiment of Figure 109 were rejected under 35 U.S.C. §112, second paragraph, and were rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent 5,416,429 to McQuade et al. (herein "McQuade").

Addressing first the rejection of the claims under 35 U.S.C. §112, second paragraph, the currently pending claims have been written to avoid that rejection.

The previous claims were rejected as they recited the term "the axial line direction", which was noted as indefinite, and as "it is unclear what 'the axial line direction' or 'the axial lines of the contact pin' represents".

In response to that position in the parent of the present application, it is first noted that the currently pending claims do not recite the term "the axial line direction", but instead recite the term "an axial line direction". Further, it is believed that the term "axial line direction" is clear in view of Figure 109 and the corresponding description in the specification.

The specification provides in detail a description of the embodiment of Figure 109 at page 103, lines 1-18. The specification points out how the contact pins 3aN are bent at the middle position X in the axial line direction. That axial line direction is clearly the direction in which the contact pins extend and the specification points out and clearly shows in Figure 109 how the contact pins 3aN are bent in that direction.

In such ways, the specification and Figure 109 are clear in the meaning of the term "axial line direction".

Further, the structure as recited in the claims is neither taught nor suggested by McQuade, and it appears that the previous rejection based on McQuade did not fully consider the limitations recited in the claims as they were directed to a non-elected species. However,

by the present divisional application directed to the species of Figure 109 the claim limitations must now clearly be considered. Further, the claims recite limitations neither taught nor suggested by McQuade.

The claims recite "the plurality of contact pins include a fabricated bending point at a middle portion in an axial line direction with an Ni plating treatment". McQuade does not disclose or suggest that feature, and thus the claims patentably distinguish over the teachings in McQuade.

In summary, each of the pending claims is in full compliance with all requirements under 35 U.S.C. §112, second paragraph, and each of the claims patentably distinguishes over the previously applied art to McQuade.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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Serial No:

Amendment Filed on:

2-19-02

IN THE CLAIMS

Please cancel Claims 2-11, 14-20 without prejudice:

Please amend Claims 1 and 12 as follows:

--1. (Amended) In a probe device, an improved contact probe comprising:

a film;

a plurality of wiring patterns formed on a first surface of the film, each wiring pattern having a front end portion projecting out from the first surface of the film in a direction parallel to the first surface of the film so as to form contact pins; and

a metal layer provided on a second surface of the film,

wherein the plurality of contact pins include a fabricated bending point at a middle portion in an axial line direction with a Ni plating treatment.

12. (Amended) [The] In a probe device [according to Claim 1, further comprising:],
an improved contact probe device including a plurality of contact probes, each contact probe comprising:

a film;

a plurality of wiring patterns formed on a first surface of the film, each wiring pattern having a front end portion projecting out from the first surface of the film in a direction parallel to the first surface of the film so as to form contact pins; and

a metal layer provided on a second surface of the film;

[a] wherein the plurality of contact probes are arranged such that the axial lines of the contact pins are substantially vertical to a contact face of an object of measurement, and the plurality of contact probes are disposed in parallel so as to provide spaces between respective faces of the films of the plurality of contact probes, and

wherein the plurality of contact pins include a fabricated bending point at a middle portion in an axial line direction with a Ni plating treatment.--

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